

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

TQ DELTA, LLC,

Plaintiff,

v.

2WIRE, INC.,

Defendant.

C.A. No. 13-cv-1835-RGA

**PLAINTIFF TQ DELTA'S (1) REPLY BRIEF IN SUPPORT OF THEIR MOTION FOR
SUMMARY JUDGMENT OF NO INVALIDITY OF FAMILY 2 PATENT CLAIMS
UNDER §§101 & 112 AND (2) OPPOSITION TO 2WIRE'S CROSS-MOTION FOR
SUMMARY JUDGEMENT OF INVALIDITY UNDER §101**

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I. ARGUMENT

TQ Delta moved for summary judgement that claims 17 and 18 of the ‘881 patent are not invalid under 35 U.S.C. §§ 101 or 112. Notably, 2Wire did not move for summary judgement of invalidity under either 35 U.S.C. §§ 101 or 112 by the deadline stated in the Final Scheduling Order. *See* D.I. 513. Instead, as part of 2Wire’s response to TQ Delta’s motion, 2Wire attempted to cross-move for summary judgement of invalidity under 35 U.S.C. § 101. As an initial matter, the proper time for 2Wire to file motions for summary judgment on the Family 2 patent claims was February 19th, not March 5th, and as such, 2Wire’s cross-motion for summary judgement is nothing more than an attempt by 2Wire to disregard the Court’s scheduling order. In any case, 2Wire has not shown, by clear and convincing evidence, that claims 17 and 18 of the ‘881 patent are invalid under 35 U.S.C. § 101. Similarly, 2Wire has failed to show, and cannot show as a matter of law, that claims 17 and 18 are invalid under any paragraph of 35 U.S.C. § 112 and there are no genuine disputes of material fact regarding 2Wire’s defenses under 35 U.S.C. § 112. The Court should deny 2Wire’s belated cross-motion and grant summary judgment in favor of TQ Delta that claims 17 and 18 are not invalid under 35 U.S.C. §§ 101 or 112.

A. TQ Delta Is Entitled To Summary Judgment That Claims 17 and 18 of The ‘881 Patent Are Not Invalid Under 35 U.S.C. § 101

Claims 17 and 18 pass muster under both steps of the *Alice* because (1) they are not directed to an abstract idea and (2) even if it was determined that they were, they include additional elements that transform the nature of the claim into patent-eligible subject matter.

1. Claims 17 and 18 are Not Directed to an Abstract Idea

In computer-related technologies, a claim is patent-eligible if “the focus of the claims is on the specific asserted improvement in computer capabilities.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335-36 (Fed. Cir. 2016). Claims 17 and 18 each recite, and are directed to,

bonded transceivers that utilize a specific method of reducing the difference in configuration latency between two bonded transceivers. While both claims include and claim “bonded transceivers,” the “focus” of the claims are on the specific asserted improvement, namely, that utilizing at least one transmission parameter value to reduce a difference in configuration latency between the bonded transceivers provides for bonded DSL transceivers that can have different individual data rates and, yet, a reduced difference in latency. As TQ Delta explained, “[c]ertain prior art bonding schemes did not allow the links in a bonded group to have different data rates and, thus, all links in a group would be forced to use the data rate of the slowest link in the group, thereby wasting capacity of faster links in the group. The ‘881 patent advantageously allows the faster links to use their full capacity.” D.I. 740 (TQ Delta Br.) at p. 4. The “focus” of claims 17 and 18, utilizing at least one transmission parameter to reduce a difference in latency, is clearly an improvement in the capability of the prior art multicarrier transceivers.

In its response, 2Wire argues for the first time¹ that “Claims 17 and 18 of the ‘881 patent recite nothing more than an abstract idea: a math equation. . . .” D.I. 858 at p. 2. 2Wire’s and its expert’s delay in making this argument not only prejudices TQ Delta, it also demonstrates its lack of merit, namely, that it is only an attempt to force the asserted claims into one of the recognized categories of abstract ideas. 2Wire’s argument is meritless for two reasons. First, claims 17 and 18 do not claim a mathematical relationship, formula, equation, or calculation, and therefore should not be categorized as an abstract idea. *See* Ex.² 1 (2019 Revised Patent Subject Matter Eligibility Guidance) at pp. 9-11 (“Claims that do not recite matter that falls within these

¹ In Dr. Jacobsen’s Opening Report, she did not argue that the claimed invention fell within one of these categories, but rather, over-simplified the asserted claims describing them as “cover[ing] nothing more than the abstract idea of delaying traffic on one route, while speeding it up on another.” D.I. 743-5 (Jacobsen Opening Report) at ¶119.

² All citations to “Ex. ____” herein are to the Declaration of James P. Murphy dated March 12, 2019 filed herewith.

enumerated groupings of abstract ideas should not be treated as reciting abstract ideas”). Indeed, each claim recites “utilizing a transmission parameter value to reduce a difference in configuration latency.” Second, the fact that claims 17 and 18 allegedly utilize mathematical equations would not render the claims themselves abstract ideas. *See Diamond v. Diehr*, 450 U.S. 175, 188 (1981).

2Wire cites to no law that would render a claim an abstract idea because it allegedly contains “mathematical” elements. 2Wire, citing to *Electric Power Group*, states that “[t]he Federal Circuit has held that claims ‘analyzing information. . . by mathematical algorithms, without more’ are drawn to a quintessential abstract concept, as are claims directed to ‘presenting the results of abstract processes of collecting and analyzing information, without more.’” D.I. 858 at p. 7 (citing *Electric Power Group, LLC v. Alstrom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (underlining added)). Contrary to 2Wire’s assertions, claims 17 and 18 are not “analyzing information. . . by mathematical algorithms, without more.” *Id.* Rather, claims 17 and 18 claim “bonded transceivers,” and that those transceivers are capable of utilizing at least one transmission parameter to reduce a difference in configuration latency. 2Wire’s characterization disregards the specifically claimed improvement over the prior art multicarrier transceivers.

Second, 2Wire’s argument that “it is precisely the use of math equations for adjusting transmission parameter values that renders claims 17 and 18 abstract and invalid,” (D.I. 858 at p. 9) is legally misguided. Even if claims 17 and 18 rely on underlying mathematical equations, such reliance does not make claims 17 and 18 abstract ideas. For example, in *Huawei Techs., Co., Ltd. v. Samsung Elecs. Co., Ltd.*, No. 3:16-CV-02787, 2016 WL 6834614, at *6 (N.D. Cal. Nov. 21, 2016), the district court found that claims related to “reduc[ing] signal interference

when a mobile device connects to a cellular network” were patent-eligible even though they relied on various mathematical equations. The court in that case observed that the mathematical equations employed by the relevant claims had “no significance outside of decreasing interference between mobile devices.” *See id.* at *8. The court explained that:

The only “abstract idea” identified by [the defendant] is the mathematical equation used. . . But [the defendant] itself admits that the equation has no significance when removed from the context of mobile devices connecting to a base station within a cell. . . . If the equation has no independent significance outside the technological environment. . . then the claims tying the equation to a mobile device cannot be an attempt to limit something that could be broader, and thus, there is no attempt to “circumvent” patent law.

Id. Similarly, in *Sycamore IP Holdings LLC v. AT&T Corp.*, 294 F. Supp. 3d 620, 653 (E.D. Texas 2018), the court found claims relating to encoding information groups and control codes as patent-eligible subject matter. The Court explained:

While it is true that the invention in this case involves the manipulation of data, the point of the invention is not simply the transmission of data in coded form, but the conversion of the data into a form that makes the communication of the data more efficient. The specific function of the recited encoding scheme is to add efficiency to the process in a particular manner. . . the recited protocol, even though expressed (as are all computer operations) as an algorithm, is a concrete technical contribution and not simply the embodiment of an abstract idea.

Id.; *see also Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1347-48 (Fed. Cir. 2017) (“claims are patent eligible under § 101 ‘when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect.’”) (internal citations omitted). As such, 2Wire’s attempt to unfairly characterize claims 17 and 18 as an abstract idea for allegedly “embrac[ing] a math equation,” is based on an incorrect understanding of patent-eligible subject matter under step 1 of the *Alice* framework.

Additionally, 2Wire states that “[t]hese equations do not actually improve the transceivers,” comparing the invention of the asserted claims to air traffic control.³ D.I. 858 at p. 8. But 2Wire again misunderstands the law. As TQ Delta explained, whether claims are directed to patent-eligible subject matter does not turn on anticipation or obviousness. D.I. 740 at p. 9.

2. Claims 17 and 18 Include Additional Transformative Inventive Concepts

The Court need not reach step two of *Alice* because 2Wire has failed to satisfy step one. *See Enfish*, 822 F.3d at 1339. However, even if 2Wire had shown that the asserted claims were directed to an abstract idea, the claims are still patent-eligible under step two. Under step two, the Court must uphold patent-eligibility if the limitations of the claims “taken together as an ordered combination. . . recite an invention that is not merely the routine or conventional use of the [underlying technology].” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014). 2Wire, in its response, does not consider the limitations of the claims “taken together as an ordered combination,” but rather, looks at each limitation in isolation to make its incorrect conclusion that claims 17 and 18 do not recite any claimed advance over the prior art. D.I. 858 at p. 10. This is evident by 2Wire’s recitation of individual, allegedly undisputed, facts such as “[i]t is undisputed that the bonded transceivers themselves are entirely conventional,” and “the transmission parameters. . . are the known and conventional transmission parameters.” *Id.* But this is precisely the problem with 2Wire’s argument. 2Wire ignores that the improved, claimed “bonded transceivers” of claims 17 and 18 solve a specific problem with respect to the operation of bonded transceivers. As TQ Delta explained:

[B]onded transceivers that utilize transmission parameter values to reduce the difference in their configuration latencies, reduce the buffering required at the transmitter and/or the receiver to account for otherwise potentially large differences in the latencies of the bonded lines. This results in reduced buffering

³ Dr. Jacobsen’s air traffic control analogy is irrelevant to invalidity. *See* D.I. 740 at p. 9.

complexity and reduce memory size, which are both improvements to bonded transceivers.

D.I. 740 at p. 10 (underlining added).

2Wire addresses these improvements by stating that “[t]here is no discussion of these alleged ‘improvements to bonded transceivers’ anywhere in the patent,” (D.I. 858 at p. 12) but that argument is irrelevant to an invalidity analysis under § 101. In an attempt to downplay the improvements identified by TQ Delta, 2Wire argues that “[n]either claim 17 nor claim 18 recites or requires reducing the size of a buffer or reducing buffering complexity.” D.I. 858 at p. 12. But this argument is a non-starter. Claims 17 and 18 need not always lead to the improvement, *i.e.*, to a reduction in buffering complexity or in memory size, in order to pass muster under § 101 and 2Wire points to no authority for such proposition. *See The California Institute of Technology, v. Broadcom Limited*, No. 16-CV-3714 (C.D. Cal. Jan. 18, 2019) (“the issue is not whether a claim used in practice always leads to an improvement, but whether the overall structure and framework created by the claims leads to a situation where certain benefits/improvement flow from that structure”). Furthermore, the ‘881 patent was not required to “identify [a] previously unknown-relationship,” (D.I. 858 at p. 12) nor did TQ Delta argue that it did. 2Wire’s assertions are entirely improper because it is not “undisputed that claims 17 and 18 claim patent ineligible subject matter.” *Id.* at p. 13. To the contrary, claims 17 and 18 are directed to patent-eligible subject matter because they describe the use of transmission parameters to reduce the differential latency between the bonded lines which may result in reduced buffering complexity and reduce memory size, both of which are improvements to bonded transceivers. As such, the Court should grant TQ Delta’s motion for summary judgment that claims 17 and 18 are not invalid under §101.

B. TQ Delta Is Entitled To Summary Judgment That Claims 17 and 18 of The ‘881 Patent Are Not Invalid Under Any Paragraph of 35 U.S.C. § 112

2Wire states that “a POSITA would not understand from reading the ‘881 patent any way of utilizing transmission parameters to reduce a difference in configuration latency, aside from setting the difference in configuration latencies to zero.” D.I. 858 at p. 13. But as TQ Delta explained, the Court has heard, and rejected, this argument during the *Markman* hearing. D.I. 740 at p. 11 (*citing* D.I. 399 at pp. 53-57)). The Court should again reject this argument now.

1. Claims 17 and 18 of the ‘881 Patent are not indefinite

Claims 17 and 18 present no “zone of uncertainty.” D.I. 740 at p. 12. As explained, the claim is infringed if a product is configurable to bond transceivers where each transceiver uses at least one transmission parameter value that reduces a difference in configuration latency between the bonded transceivers and it is not infringed if a product allows its bonded transceivers to use any transmission parameter values irrespective of the difference in latency that may result. *Id.*

2Wire argues that “a POSITA would not know, with reasonable certainty, when ‘each bonded transceiver [of a plurality of transceivers is] utilizing at least one transmission parameter value to reduce a difference in latency between the bonded transceivers.’” D.I. 858 at p. 14 (emphasis added). 2Wire’s argument is misguided. 2Wire and its expert seem to think that each transceiver must complete an initialization process using a first set of transmission parameters, at which point a known difference in configuration latency can be observed, and then this known difference is subsequently reduced by selecting a second set of transmission parameters. But 2Wire’s temporal restriction on “when” the reduction in configuration latency occurs is found nowhere in the claim language. The claim does not recite “to reduce a [known] difference in [already-existing] latency” but rather, the claim language is broad enough to encompass reducing a *potential* difference in latency. In fact, in the example embodiment, the bonded transceivers are

first initialized using transmission parameters that are selected to reduce a difference in configuration latency. Therefore, there is no “reference point to determine that a difference in latency has been reduced” because the product’s source code includes constraints on the transmission parameters of each line which requires them to fall within a particular bound right off the bat. 2Wire also states that Dr. Jacobsen, “has presented evidence that a POSITA would not know, with reasonable certainty, **whether** a difference in configuration latency has been reduced based on the intrinsic record of the ‘881 patent.”⁴ D.I. 858 at p. 14. This argument is senseless. A POSITA would know whether a difference in configuration latency has been reduced based on whether the source code affirmatively constrains the transmission parameters of each line within some bound. Thus, 2Wire’s argument that “there is no way to establish a reference point to determine that a difference in latency has been reduced,” is without merit.

2Wire alleges that TQ Delta introduces a new argument regarding the introduction of an “offset value.” D.I. 858 at p. 16. But this argument is merely responsive to Dr. Jacobsen’s statement that “the patent does not disclose how to configure the transmission parameters in order to provide configuration latencies that are not identical.” D.I. 743-5 (Jacobsen Op. Rpt.) at 135. Dr. Jacobsen recognizes that the ‘881 patent discloses an equation ($N1 \cdot D1 / R1 = N2 \cdot D2 / R2$) for determining transmission parameters that reduce the potential difference in configuration latency between the bonded transceivers to zero. *See* D.I. 740 at p. 14. Dr. Jacobsen’s POSITA, someone with a Ph.D in Electrical Engineering, would recognize that non-identical configuration latencies can be realized by adding an offset value to one side of the equation. *See* D.I. 740 at p.

⁴ To the extent 2Wire is relying on evidence or arguments set forth in Dr. Jacobsen’s declaration that are not set forth in 2Wire’s brief, such evidence or argument is waived. *See Rydex Tech. LLC v. Baxter International, Inc.*, 105 F. Supp. 3d 420, 426 (D. Del. 2015) (“Burying this theory in an expert declaration, not in response to Defendant’s briefing, might be a waiver even if the theory were fully set forth in the declaration.”).

14 (providing an example where the difference in latency could be reduced to no more than 2 milliseconds by simply including “+/- 2 milliseconds” to either side of the equation). Instead of addressing this argument, 2Wire states that “the added ‘offset value’ would make it nearly impossible to determine whether the differential latency was reduced, increased, or stayed the same.”⁵ D.I. 858 at p. 16. But 2Wire again misses the point. The claim does not require a determination of what the latency “could have been,” because it is enough to reduce a potential difference in latency as the example embodiment demonstrates.

2. Claims 17 and 18 of the ‘881 Patent are enabled

2Wire states that “claims 17 and 18 are not enabled because the specification, claims, and drawings of the ‘881 patent do not describe to a POSITA how to reduce a difference in latency without eliminating it entirely.” D.I. 858 at p. 17. But as TQ Delta explained, Dr. Jacobsen’s POSITA, a Ph.D in Electrical Engineering, would recognize that non-identical configuration latencies can be achieved by adding an offset value to one side of the equation. D.I. 740 at p. 16. 2Wire alleges that “TQ Delta’s ‘offset value’ scenario still does not allow a POSITA to determine whether or not a difference in latency between two connections has been reduced,” but this argument is misguided because as explained, the claim is broad enough to encompass reducing a *potential* difference in latency.⁶ 2Wire raises no genuine issue of material fact.⁷

⁵ 2Wire’s statement that “[i]t is undisputed that the new equation offered by TQ Delta does not appear anywhere in the patent,” is misleading. The patent specification need not set forth an explanation for every possible detail of the claimed invention. *See S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001) (“The law is clear that patent documents need not include subject matter that is known in the field. . . . for patents are written for persons experienced in the field of the invention. To hold otherwise would require every patent document to include a technical treatise for the unskilled reader.”) (underlining added).

⁶ 2Wire quotes *Pi-Net, Int’l v. JP Morgan Chase & Co.*, 42 F. Supp. 3d 579, 593 (D. Del. 2014) for the notion that “[i]t is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.” D.I. 858 at

3. Claims 17 and 18 of the ‘881 Patent have written description support

2Wire states that “the claims, specification, and intrinsic record do[] not describe any way of ‘utilizing a transmission parameter to reduce a difference in latency’ other than setting the difference in configuration latency to zero.” D.I. 858 at pp. 18-19. 2Wire seems to argue that the claims lack written description support because every possible embodiment is not explicitly disclosed. But that is not the law. “The level of detail required to satisfy the written description requirement depends, in large part, on the nature of the claims and the complexity of the technology.” *Strech, Inc. v. Research & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1285 (Fed. Cir. 2012) (citations omitted). In this case, the equation provided for in the specification meets the level of detail required to satisfy the written description requirement because it provides a “definite way” to reduce differential latency and Dr. Jacobsen’s POSITA, someone with a Ph.D in Electrical Engineering, would recognize that transmission parameters can be selected such that the differences in latencies can be reduced without eliminating the difference completely. 2Wire has failed to present any genuine issues of material fact and no evidence exists upon which a reasonable jury could invalidate claims 17 and 18 for lack of written description.

II. CONCLUSION

This Court should (1) grant summary judgment that 2Wire cannot, as a matter of law, demonstrate that Claims 17 and 18 of the ‘881 patent are invalid under 35 U.S.C. §§ 101 and 112 and (2) deny 2Wire’s cross-motion for summary judgement of invalidity under 35 U.S.C. § 101.

p. 18. But 2Wire does not explain how the addition of an offset to one side of the disclosed equation is allegedly the “novel aspect of [the] invention.”

⁷ 2Wire’s response contains no analysis of the *Wands* factors. See D.I. 740 at p. 15; *M2M Solns. LLC v. Sierra Wireless, Am., Inc.*, No. 12-00030-RGA, 2016 WL 1298961, at *4 (D. Del. March 31, 2016) (“Defendants offer nothing more than vague references to the enablement standard, without any discussion of the state of the art, the relative skill and understanding of a POSITA, the amount of experimentation that would be necessary, or any other relevant *Wands* factors.”).

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Respectfully submitted,

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